IN THE CLAIMS

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please **AMEND** claim 9 as follows.

1. (CANCELLED)

2. (CANCELLED)

3. (ORIGINAL) A halftoning method of converting a multilevel input image into a binary image, comprising:

converting the multilevel value of a given noteworthy pixel of the multilevel input image into a binary value while pixels of the multilevel input image are scanned successively;

diffusing a possible error, which has occurred in binary value with respect to the noteworthy pixel, to unscanned pixels adjacent to the noteworthy pixel by one diffusion technique;

changing the technique of said diffusing to another in accordance with a predetermined manner as the scanning of the successive pixels of the multilevel input image progresses;

discriminating whether or not the noteworthy pixel is a pixel constituting part of a profile of the multilevel input image; and

detecting the direction in which the profile of the multilevel input image extends with respect to the noteworthy pixel, wherein

if the result of said discriminating is positive, said changing comprises changing the error diffusion technique from one to another, and values according to the occurred error are added to the values of the unscanned pixels along the detected direction of the profile as an exceptional process.

4. (PREVIOUSLY PRESENTED) The halftoning method according to claim 3, wherein the error diffusion technique is changed for every pixel of the multilevel input image.

5. (CANCELLED)

6. (PREVIOUSLY PRESENTED) The halftoning method according to claim 3, wherein said profile discriminating is carried out by calculating a profile value of the noteworthy pixel based on both the multilevel value of the noteworthy pixel and those of the adjacent pixels, and comparing the calculated profile value with a predetermined value.

7. (CANCELLED)

8. (PREVIOUSLY PRESENTED) The halftoning method according to claim 4, wherein said profile discriminating is carried out by calculating a profile value of the noteworthy pixel based on both the multilevel value of the noteworthy pixel and those of the adjacent pixels, and comparing the calculated profile value with a predetermined value.

9. (CURRENTLY AMENDED) The halftoning method according to ~~claim 4~~claim 3, wherein in said error diffusing, the one error diffusion technique is a technique of proportionally distributing the occurred error to the plural unscanned pixels adjacent to the noteworthy pixel in accordance with a predetermined weighting pattern,

wherein the changing of the error diffusing technique comprises selecting a changing technique from a group of techniques consisting of changing the error diffusion technique for every pixel of the multilevel input image, changing the error diffusion technique to another selected in a predetermined order from a plurality of error diffusion techniques, changing the error diffusion technique to another selected at random from a plurality of error diffusion techniques, and changing said predetermined weighting pattern to another, and

wherein said profile discriminating is carried out by calculating a profile value of the noteworthy pixel based on both the multilevel value of the noteworthy pixel and those of the adjacent pixels, and comparing the calculated profile value with a predetermined value.

10. (PREVIOUSLY PRESENTED) The halftoning method according to claim 6, wherein a two-dimensional digital filter dedicated to enhance the profile is used in said calculating of the profile value.

11. (CANCELLED)

12. (PREVIOUSLY PRESENTED) The halftoning method according to claim 8, wherein a two-dimensional digital filter dedicated to enhancing the profile is used in said calculating of the profile value.

13. (PREVIOUSLY PRESENTED) The halftoning method according to claim 9, wherein a two-dimensional digital filter dedicated to enhancing the profile is used in said calculating of the profile value.

14. (PREVIOUSLY PRESENTED) The halftoning method according to claim 10, wherein said two-dimensional digital filter dedicated to enhancing the profile is a Laplacian filter.

15. (CANCELLED)

16. (PREVIOUSLY PRESENTED) The halftoning method according to claim 12, wherein said two-dimensional digital filter dedicated to enhancing the profile is a Laplacian filter.

17. (PREVIOUSLY PRESENTED) The halftoning method according to claim 13, wherein said two-dimensional digital filter dedicated to enhancing the profile is a Laplacian filter.

18. (PREVIOUSLY PRESENTED) The halftoning method according to claim 10, wherein said two-dimensional digital filter dedicated to enhancing the profile is a Prewitt filter.

19. (CANCELLED)

20. (PREVIOUSLY PRESENTED) The halftoning method according to claim 12, wherein said two-dimensional digital filter dedicated to enhancing the profile is a Prewitt filter.

21. (PREVIOUSLY PRESENTED) The halftoning method according to claim 13, wherein said two-dimensional digital filter dedicated to enhancing the profile is a Prewitt filter.

22. (PREVIOUSLY PRESENTED) The halftoning method according to claim 6, wherein the profile value is directly calculated by making addition and subtraction individually on the multilevel values of the noteworthy pixel and the adjacent pixels.

23. (CANCELLED)

24. (PREVIOUSLY PRESENTED) The halftoning method according to claim 8, wherein the profile value is directly calculated by making addition and subtraction individually on the multilevel values of the noteworthy pixel and the adjacent pixels.

25. (PREVIOUSLY PRESENTED) The halftoning method according to claim 9, wherein the profile value is directly calculated by making addition and subtraction individually on the multilevel values of the noteworthy pixel and the adjacent pixels.

26. (PREVIOUSLY PRESENTED) The halftoning method according to claim 3, wherein in said changing comprises changing the error diffusion technique to another that is selected in a predetermined order from a plurality of error diffusion techniques.

27. (PREVIOUSLY PRESENTED) The halftoning method according to claim 3, wherein in said changing comprises changing the error diffusion technique to another that is selected at random from a plurality of error diffusion techniques.

28. (PREVIOUSLY PRESENTED) The halftoning method according to claim 3, wherein

in said error diffusing, the one error diffusion technique is a technique of proportionally distributing the occurred error to the plural unscanned pixels adjacent to the noteworthy pixel in accordance with a predetermined weighting pattern, and

in said technique changing, the error diffusion technique is changed by changing said predetermined weighting pattern to another.

29. (PREVIOUSLY PRESENTED) The halftoning method according to claim 3, wherein if a plurality of multilevel input images to be halftoned have an approximate profile, said discriminating is carried out for only one of the plural multilevel input images, and the result of said discriminating is used in halftoning the remaining multilevel input images.

30. (CANCELLED)

31. (PREVIOUSLY PRESENTED) The halftoning method according to claim 4, wherein if a plurality of multilevel input images to be halftoned have an approximate profile, said discriminating is carried out for only one of the plural multilevel input images, and the result of said discriminating is used in halftoning the remaining multilevel input images.

32. (CANCELLED)

33. (CANCELLED)

34. (CANCELLED)

35. (PREVIOUSLY PRESENTED) A halftoning apparatus converting a multilevel input image into a binary image, comprising:

a binarizing section converting the multilevel value of a given noteworthy pixel of the multilevel input image into a binary value while pixels of the multilevel input image are scanned successively;

an error diffusing section diffusing a possible error, which has occurred in binary value with respect to the noteworthy pixel, to unscanned pixels adjacent to the noteworthy pixel by one diffusion technique;

an error diffusion technique changing section changing said one diffusion technique of said diffusing to another in accordance with a predetermined manner as the scanning of the successive pixels of the multilevel input image progresses;

a pixel-on-profile detection section discriminating whether or not the noteworthy pixel is a pixel constituting part of a profile of the multilevel input image; and

a direction-of-profile detection section detecting the direction in which the profile of the multilevel input image extends with respect to the noteworthy pixel, wherein

if the result of said discriminating is positive, said error diffusion technique changing section changes the error diffusion technique from one to another and said error diffusion section performs an exceptional process of adding values according to the occurred error to the values of the unscanned pixels along the detected direction of the profile.

36. (PREVIOUSLY PRESENTED) The halftoning apparatus according to claim 35, wherein said error diffusion technique changing section changes the error diffusion technique for every pixel of the multilevel input image.

37. (CANCELLED)

38. (CANCELLED)

39. (CANCELLED)

40. (PREVIOUSLY PRESENTED) A computer-readable recording medium in which a halftoning program instructs a computer to execute a function of converting a multilevel input image into a binary image is recorded, wherein said halftoning program instructs the computer to function as follows:

a binarizing section converting the multilevel value of a given noteworthy pixel of the multilevel input image into a binary value while pixels of the multilevel input image are scanned successively;

an error diffusing section diffusing a possible error, which has occurred in binary value with respect to the noteworthy pixel, to unscanned pixels adjacent to the noteworthy pixel by one diffusion technique;

an error diffusion technique changing section changing said one diffusion technique of said diffusing to another in accordance with a predetermined manner as the scanning of the successive pixels of the multilevel input image progresses;

a pixel-on-profile detection section for discriminating whether or not the noteworthy pixel is a pixel constituting part of a profile of the multilevel input image; and

a direction-of-profile detection section detecting the direction in which the profile of the multilevel input image extends with respect to the noteworthy pixel, wherein

if the result of said discriminating is positive, said halftoning program instructs the computer in such a manner that said error diffusion technique changing section changes the error diffusion technique from one to another and said error diffusion section performs an exceptional process of adding values according to the occurred error to the values of the unscanned pixels along the detected direction of the profile.

41. (PREVIOUSLY PRESENTED) The computer-readable recording medium according to claim 40, wherein said halftoning program instructs the computer in such a manner that said error diffusion technique changing section changes the error diffusion technique for every pixel of the multilevel input image.

42. (CANCELLED)